Remarks

This responds to the Office action mailed October 23, 2006. Reconsideration and allowance are respectfully solicited.

As requested by the Examiner, claims 1-49, 51, 53-104, and 106 are canceled in view of the restriction requirement. Applicant reserves the right to present these claims in another application.

Section 112

The Examiner's rejection of claims 50, 52, 105, and 107-109 under 35 U.S.C. § 112 as being indefinite for failing to particularly point out and distinctly claim the invention is traversed.

To further clarify them, the limitations "may be made explicit, may be priced, and may be used" in independent claims 50, 105, and 108 are amended to recite "are allowed to be made explicit, priced, and used."

Also, to more clearly relate to the language in the preamble, the limitations "a debtor and a creditor" are amended to "the creditor and the debtor."

In addition, to clarify that "any possible" modifies not just "permutation or combination . . ." but also "the timing thereof," "the timing" is amended to "any possible timing."

As to dependent claim 52, the claim is further clarified by amending "wherein pricing and capturing the value of a financial entities' regulatory capital savings is done using the following equation" to "further comprising the step of pricing and capturing the value of a financial entity's regulatory capital using the following equation." This amendment also corrects a typographical error by changing "entities' " to "entity's." Dependent claims 105 and 109 are similarly amended.

In view of the foregoing, claims 50, 52, 105, and 107-109 satisfy section 112.

Section 101

The Examiner's rejection of claims 50, 20, 105, and 107-109 under 35 U.S.C. § 101 as directed to nonstatutory subject matter is also traversed.

The Examiner first maintains that the claims do not produce a tangible result because "[c]laims 50, 105 and 108 recite the steps of providing three different clauses that doesn't [sic] ensure anything real world." (10/23/06 Office Action at 3.)

But claim 105 recites a "computer-based system for structuring an interest-based instrument" comprising three means-plus-function structures for the computer-based system to use in structuring the instrument. Thus, claim 105 recites not steps or mere clauses, but elements of a computing machine that are certainly tangible, specific, substantial, and credible. Claim 105 is also analogous to claims in the King reference (U.S. Patent No. 5,742,775) cited by the Examiner. (*See, e.g.*, King at claim 1.)

Moreover, claim 108 recites a "computer-based method for structuring an interest-based instrument" comprising three steps for the computer-based method to use in structuring the instrument. Thus, claim 108 covers software that runs on a computing machine, which again is clearly tangible, specific, substantial, and credible. Claim 108 is also analogous to claims in the King patent. (*See, e.g.*, King at claim 75.)

Furthermore, claim 50 recites a "method for structuring an interest-based instrument" comprising three steps for the method to use in structuring the instrument. An "instrument" is a "legal document in which some contractual relationship is given formal expression or by which some right is granted — for example, notes, contracts, agreements." J. Downes and J.E. Goodman, *Barron's Finance & Investment Handbook* 378 (5th ed.1986). An instrument is thus something "real world," or the opposite of abstract, and therefore a process that structures an instrument is clearly tangible, specific, substantial, and credible. Claim 50 is also analogous to the claims in

Ex parte Lundgren, 76 U.S.P.Q.2d 1385 (Bd. Pat. App. & Int. 2005), for which the Board of Patent Appeals and Interferences found section 101 rejections inappropriate.

The Examiner also asserts that the limitation of "any possible combination or permutation of principal and interest to be paid, and the timing thereof" does not produce anything that is concrete — i.e., it is unrepeatable or unpredictable. But providing for an unlimited number of choices at any one time does not imply that the choices at two or more times cannot be both repeatable and predictable. Just because you may choose any of Baskin Robbins' 31 flavors each time you visit does not mean that you cannot choose the same flavor repeatedly.

Moreover, a search of the USPTO Web site conducted on January 19, 2007 reveals that since 1976 over 6000 U.S. patents have issued with claims including "any combination," "any permutation," "any possible," or "any possible combination." (*See* Appendix A, attached to this Amendment.) Clearly, allowing infinite choice does not preclude patent subject matter eligibility.

Furthermore, as the specification makes clear, results are exactly reproducible if initial parameters remain unchanged or if the initial parameters change in the same ways. (*See, e.g.*, specification at p. 25, line 5 ("the resulting monthly payment amount *may be unchanged* or may vary") (emphasis added).)

In view of the foregoing, independent claims 50, 105, and 107 — and thus dependent claims 52, 108, and 109 — are directed to section 101 subject matter.

Section 102

The Examiner's rejection of claims 50, 105, and 108 under 35 U.S.C. § 102 as anticipated by King (U.S. Patent No. 5,742,775) is also traversed.

The present invention teaches systems and methods that allow a financial instrument to be structured so that the underlying principal is callable, putable, or both. Among other things, the

invention permits structuring a financial instrument that provides debtors — such as mortgagors — with incentives to refinance borrowings when interest rates rise.

In contrast, King narrowly discloses a financial instrument that is akin to, or a variation of, a guaranteed investment contract. Instead of incentivizing refinancings, King ostensibly reduces risks to borrowers and lenders by providing an instrument that depends upon financing particular chosen activities:

> The system provides borrowers (issuing entity) the ability to more closely match interest payments to revenues generated from financed activities, while accelerating the obligation if financed activity revenues permit or interest rate movements benefit acceleration. . . .
>
> . . . .
>
> The system involves a process of identifying the project or activity to be financed, seeking lender support through the use of financial intermediaries, investment bankers and other professionals, then issuing a financial instrument . . . .

[King at col. 7, lines 5-27.]

Contrary to the constraints required by King, the present invention provides a system or method for structuring a financial instrument that is not necessarily linked to any particular identified project or activity. The present invention also does not require seeking lender support.

King's disclosure also links an instrument to the borrower's financial condition and relates the instrument to the performance of government securities:

> The [King] invention provides a means of assuring the borrower's ability to pay its contractual obligations under the loan agreement. For the lender, the system is designed to provide a method of compensating the lender within a range above the rate on government securities of similar term to that remaining on the financial instrument. Only in an event which would increase borrower insolvency could the rate paid by the borrower be less than the rate on government securities of similar term. To compensate for this possibility, when the borrower's activities are generating profits, the system provides a means of increasing the rate of interest paid to the lender.

[King at col. 7, lines 12-23.]

Unlike King, the present invention does not require taking into account a debtor's ability to pay, whether the debtor's activities are generating profits, whether the debtor's insolvency might increase, or the rate of government securities.

Additionally, King contemplates only long-term arrangements involving reinvestments:

> If a lender has funds which must be continually reinvested over a long period of time, its primary considerations are ultimate repayment and compensation for funds outstanding. The system administers a long-term lending relationship between a lender and a borrower which takes into account changes in market interest rates and then compensates or manages credit exposures, reducing transactional costs and increasing overall compensation to the lender.
>
> . . . For the borrower, the system attempts to create a flexible borrowing arrangement on a long-term basis.

[King at Col. 6, line 64 to Col. 7, line 11; Certificate of Correction.]

Again contrary to King, the present invention permits structuring financial instruments with any possible timing. The present invention also does not require reinvestment.

The claims of the present invention as currently amended make clear the distinctions over King. For example, amended claim 50 provides:

> 50. A method for structuring an interest-bearing instrument in a subject market, the instrument having a debtor, a creditor, *a sensitivity to parameter changes*, *an extension risk*, a credit risk, and an underlying obligation having a principal size, an interest rate, and a payment timing, comprising the steps of:
>
> (a) providing that the instrument's *sensitivity to parameter changes allow, from any time zero*, the debtor and the creditor to agree upon *any possible combination or permutation of principal and interest to be paid, and any possible timing thereof*;
>
> (b) providing that the instrument's *extension risk and credit risk, from any time zero, be completely subject to the creditor's and debtor's control* through a calculation of an agreement upon interest rates; and
>
> (c) providing that *any options* in the subject market are allowed, *from any time zero*, to be *made explicit*, priced, and used to *correlatively adjust* the principal size, interest rate, and payment timing of the underlying obligation.

With regard to claim 50's preamble and element (a), the Examiner cites King at column 6, line 60 to column 7, line 46. But nothing there or elsewhere in King discusses taking cognizance of a sensitivity to parameter changes or an extension risk.

Although King in some places speaks about "parameters," there is no discussion of parameter sensitivities. For one or more parameters selected and the values input, a function (such as Equation (8) in the present application) yields one or more parameter sensitivities, or change(s) in the value of the function relative to the parameter(s). As described in the present application's specification, any variations or adjustments to parameters are taken into consideration and calculated. (*See, e.g.*, specification at p. 17, lines 16-20 [Equation (8)]; p. 22, line 25; p. 24, lines 14-15; p. 25, line 29; p. 28, line 6.) The portion of King that the Examiner cites does not teach this.

King is also entirely devoid of any teaching or suggestion that a financial instrument's sensitivity to parameter changes allow, *from any time zero*, the debtor and the creditor to agree upon any possible combination or permutation of principal and interest to be paid, and any possible timing. To further clarify this distinction over King, element (a) of claim 50 has been amended to specifically recite "from any time zero." (Elements (b) and (c) have been similarly amended.) Support for this amendment may be found in the specification. (*See, e.g.*, specification at p. 4, line 8; p. 7, line 30.)

Instead of this flexibility permitted by the claimed invention, a financial instrument according to King — as discussed above — has numerous constraints, including requirements to:

- identify particular activities to be financed;
- match interest payments to revenues generated from the identified activities;
- seek lender support through the use of financial intermediaries and others;
- assure the borrower's ability to pay its contractual obligations;
- assess whether the debtor's activities are generating profits;
- assess whether the debtor's insolvency might increase; and

- compare the instrument's rate to the rate of government securities.

King also might be read to discuss dealing with credit risk in very limited ways, but King does not deal with extension risk. As the present application makes clear, the invention specifically permits modifying extension risk. (*See, e.g.*, specification at p. 9, line 10; p. 28, line 10.) Again, nothing in the portion of King that the Examiner cites teaches dealing with extension as claimed. Instead, King deals with the more-constrained condition, that of acceleration, where acceleration is allowed to vary based upon external inputs (decisions) made on an ad hoc basis without benefit of being constructed in a time-zero fashion. (*See, e.g.*, King at col. 7, lines 5-9; col. 9, lines 43-44.)

Moreover, while the present invention claims an instrument that allows any possible timing, King is constrained to long-term investments. (*See, e.g.*, King at col. 7, lines 9-11.)

As to claim 50, element (b), the Examiner cites King at column 7, line 54 to column 8, line 62. But, in addition to the absence of any consideration of extension risk, nothing there or elsewhere in King teaches that the instrument's extension risk and credit risk are "completely subject to the creditor's and debtor's control" from any time zero. The constraints described above required by King simply do not permit the flexibility claimed in the present invention.

As to claim 50, element (c), the Examiner cites King at column 9, line 39 to column 10, line 56. But nothing there or elsewhere in King teaches the subject matter claimed. As described above, the claim has been amended to recite "from any time zero" to further clarify the distinctions between King's required constraints and the present invention's flexibility. In addition, for the sake of further clarity claim 50 has been amended to change "control" to "correlatively adjust." Support for this amendment may be found in the specification. (*See, e.g.*, specification at p. 25, line 10.)

Thus, as amended to recite that "any options in the subject market are allowed, *from any time zero*, to be . . . used to *correlatively adjust* the principal size, interest rate, and payment timing of the underlying obligation," the claim language clearly distinguishes over King, which discloses

neither the flexibility achieved with the present invention nor using options to correlatively adjust any aspect of a financial instrument.

Furthermore, King does not teach allowing "any option" (including implicit options) to be "made explicit" as claim 50 recites.

In light of the foregoing, independent claim 50 is clearly patentable over King. Because independent claims 105 and 108 as currently amended include similar recitations to those of claim 50, those claims also clearly distinguish over King in like manner.

This discussion has identified only some of the differences between the present invention and King, which Applicant believes are more than sufficient to demonstrate patentability over that reference. Applicant reserves the right to discuss additional differences at another time.

No new matter has been added.

This application is believed to be in condition for allowance and a notice to that effect is respectfully requested.

Respectfully submitted,

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